

WE CLAIM:

1. An isolated nucleic acid molecule which encodes a soluble protein which binds to IL-TIF/IL-22, wherein the complimentary nucleotide sequence of said isolated nucleic acid molecule, hybridizes, under stringent conditions, to SEQ ID NO: 5 or SEQ ID NO: 10.
2. The isolated nucleic acid molecule of claim 1, wherein said isolated nucleic acid molecule encodes a protein, the amino acid sequence of which is set forth in SEQ ID NO: 6 or SEQ ID NO: 11.
3. The isolated nucleic acid molecule of claim 1, comprising the nucleotide sequence set forth at SEQ ID NO: 5 or SEQ ID NO: 10.
4. Expression vector comprising the isolated nucleic acid molecule of claim 1, operably linked to a promoter.
5. Expression vector comprising the isolated nucleic acid molecule of claim 2, operably linked to a promoter.
6. Expression vector comprising the isolated nucleic acid molecule of claim 3, operably linked to a promoter.
7. Recombinant cell line or cell strain, transformed or transfected with the isolated nucleic acid molecule of claim 1.
8. Recombinant cell line or cell strain, transformed or transfected with the isolated nucleic acid molecule of claim 2.
9. Recombinant cell line or cell strain, transformed or transfected with the isolated nucleic acid molecule of claim 3.
10. Recombinant cell line or cell strain, transformed or transfected with the expression vector of claim 4.

11. Recombinant cell line or cell strain, transformed or transfected with the isolated nucleic acid molecule of claim 5.
12. Recombinant cell line or cell strain, transformed or transfected with the isolated nucleic acid molecule of claim 6.
- 5 13. Isolated, soluble binding protein which binds to IL-TIF/IL-22, having a molecular weight of from about 23 to about 40 kilodaltons, as determined by SDS-PAGE.
14. The isolated soluble protein of claim 13, comprising the amino acid sequence set forth at SEQ ID NO: 6 or SEQ ID NO: 11.
- 10 15. A method for inhibiting effect of IL-TIF/IL-22 on a cell, comprising contacting said IL-TIF/IL-22 with the soluble protein of claim 13 in an amount sufficient to bind to and antagonize said IL-TIF/IL-22.
16. A method for determining if IL-TIF/IL-22 is present in a sample, comprising contacting said sample with the protein of claim 13, and determining binding of said protein to IL-TIF/IL-22 as a determination of IL-TIF/IL-22 in said sample.
- 15 17. A method for producing a soluble, IL-22/IL-TIF binding protein comprising transforming or transfecting a cell with the isolated nucleic acid molecule of claim 1, culturing the thus transformed or transfected cell to produce said soluble binding protein, and isolating it from said cell.
- 20 18. A method for producing a soluble, IL-TIF/IL-22 binding protein, comprising transforming or transfecting a cell with the expression vector of claim 4, culturing the thus transformed or transfected cell to produce said soluble binding protein containing antagonist, and isolating it from said cell.
19. The isolated, soluble binding protein of claim 13, further comprising a detectable label.

20. The isolated, soluble binding protein of claim 13, wherein said soluble binding protein is an antagonist for IL-TIF/IL-22.
21. Isolated antibody which specifically binds to the binding protein of claim 13.
22. The antibody of claim 21, wherein said antibody is monoclonal antibody.
- 5 23. Hybridoma cell line which produces the monoclonal antibody of claim 22.
24. A method for determining presence of a soluble, protein which binds to IL-TIF/IL-22, comprising contacting said sample with the antibody of claim 21, and determining binding of said antibody to said soluble, binding protein as a determination of presence of said soluble, binding protein in said sample.
- 10 25. The method of claim 24, wherein said antibody is labeled with a detectable label.
26. A method for determining expression of nucleic acid molecule which encodes a protein antagonist of IL-TIF/IL-22 binding protein in a sample, comprising contacting said sample with an oligonucleotide which hybridizes specifically, under stringent conditions to the nucleotide sequence of SEQ ID NO: 5 or SEQ ID NO: 10, hybridization thereto being indicative of expression of said nucleic acid molecule.
- 15 27. An isolated oligonucleotide consisting of from 17 to 100 contiguous nucleotides of SEQ ID NO: 5 or SEQ ID NO: 10.
28. An isolated protein which binds to IL-TIF/IL-22, produced by the method of claim 17.
- 20 29. An isolated protein which binds to IL-TIF/IL-22, produced by the method of claim 18.
30. A method for inhibiting binding of IL-TIF/IL-22 to a binding partner, comprising adding an amount of the isolated binding protein of claim 13 to a sample containing IL-TIF/IL-ss and a binding partner therefor, sufficient to inhibit said binding.
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